IN THE CLAIMS:

1. (Currently Amended) A method for processing link state routing control messages by a network node, comprising:

identifying ~~predetermined types of~~ control messages that need to be processed by said node by type, from a set of predetermined types;

storing each of the ~~types of~~ type-identified control messages, by type, in a respective one of a plurality of message queues;

assigning a weight to each of the respective message queues based on urgency considerations for processing said control message in order to reduce likelihood that an available trunk will be declared unavailable

developing a sequence of said queues based on said weights; and

accessing said queues in accord with said sequence, and processing the control ~~queued~~ messages queued in ~~a predetermined~~ the accessed queue for at most a ~~sequence such that each message type is allotted a predetermined amount of~~ processing time of T seconds, where T is preselected.

2. (Currently Amended) The method according to claim 1, ~~further including generating~~ where said developed sequence is a round robin ~~weighted polling~~ table with number of appearances of said queues in said table being a function of the weights assigned to said queues ~~from the message queues~~.

3. (Currently Amended) The method according to claim 2, wherein a number of entries in the round robin ~~polling~~ table corresponds to a sum of the weights assigned to the message queues.

4. (Currently Amended) The method according to claim 3, further including positioning the entries in the round robin ~~polling~~ table so as to minimize a distance between multiple entries corresponding to the same message type queue.

5. (Original) The method according to claim 1, wherein the predetermined types of control messages include OSPF HELLO, LSA, and LSA acknowledgement messages

sent from further nodes.

6. (Original) The method according to claim 5, wherein the predetermined types of control messages further include OSPF HELLO refresh, LSA refresh, and LSA retransmission messages generated by the node.

7. (Original) The method according to claim 1, further including identifying at least one of the predetermined types of control messages by examining a value in a packet header of the control messages.

8. (Currently Amended) The method according to claim 1, where said weights are assigned independently of trunk utilization ~~further including specifying a maximum processing time for processing a queued message during a visit to the queues~~.

9. (Currently Amended) A method for processing link state routing control messages by a node in a network, comprising:

identifying predetermined routing control message types based upon a value in a header of routing control messages received by the node;

identifying predetermined routing control messages generated by the node;

storing each type of identified routing control message in a corresponding one of a plurality of message queues;

assigning a weight to each of the message queues in a manner adapted to reduce likelihood of declaring that an available trunk is unavailable;

generating a round robin polling table having a number of entries corresponding to the sum of the weights assigned to the message type queues; and

processing the entries in the round robin polling table such that a predetermined amount of processing power is allotted to each of the message queues.

10. (Original) The method according to claim 9, wherein the link state protocol is selected from the group consisting of OSPF and PNNI.

11. (Original) The method according to claim 9, further including minimizing a distance between entries in the polling table that correspond to the same message queue.

12. (Currently Amended) A link state network, comprising:

a plurality of nodes each including a node processor that identifies predetermined types of link state routing control messages, stores each type of identified message in a respective weighted queue, and processes said routing control messages by accessing said queues, one at a time, in a predetermined sequence based on said weighting of said queues, where said processor is limited to provide not more than a predetermined amount of processing power with each access of a queue of said queues ~~for identifying predetermined types of routing control messages and storing each type of identified message in a respective weighted queue such that the node processor processes each message type with a predetermined amount of processing power; and~~

~~a weighting processor for assigning weights to each of the respective queues~~.

13. (Currently Amended) The network according to claim 12, wherein the node processor generates a weighted round robin polling table from the messages queues to create said sequence.

14. (Original) The network according to claim 13, wherein a number of entries in the round robin polling table corresponds to a sum of the weights assigned to the message queues.

15. (Currently Amended) A node~~, comprising~~ including a node processor, characterized by:

said ~~a~~ node processor ~~for identifying~~ identifies predetermined types of link state routing control messages, ~~and storing~~ stores each type of identified message in a respective weighted queue, and ~~such that the node processor~~ processes said routing control messages by accessing said queues, one at a time, in a predetermined sequence based on said weighting of said queues, where said processor is limited to provide not more than a predetermined amount of processing power with each access of a queue of

said queues ~~each message type with a predetermined processing power~~.

16. (Currently Amended) The node according to claim 15, wherein the node processor generates a weighted round robin polling table from the message queues to create said sequence.

17. (Currently Amended) The node according to claim 16, wherein a number of entries in the round robin polling table corresponds to the sum weights assigned to the message queues.

18. (Original) The node according to claim 15, wherein the predetermined types of link state routing messages include OSPF HELLO, LSA, LSA acknowledgement, HELLO refresh, LSA refresh, and LSA retransmission messages.

19. (Original) The node according to claim 15,whereinthe node processor includes a weighting processor for determining the weights of the respective message queues.

20. (Original) The node according to claim 15, wherein the node forms a part of a network that utilizes a link state protocol selected from the group consisting of OSPF and PNNI.